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ABSTRACT

The purpose of the teacher-learner strategy (TLS) project is ostensibly to test different instructional arrangements in different national contexts to see which ones obtain the best results. The logic of this approach is compelling. Yet it is the orderly appearance of the TLS project that might be its greatest problem. The doctrine of external appearances refers to an intellectual and reductionist treatment of a problem such that once a systematic set of procedures that appear to address a problem is adopted, it is assumed that the problem disappears. That is, the systematic set of procedures becomes the focus rather than the problem itself. Looking at the past, there is no evidence to support the view that programs such as the TLS have made any difference in measurable outcomes or in processes of schooling. Even if the TLS experiments are designed in ways that are technically acceptable with respect to sampling and data analysis, the pitfalls of cross-national experiments are overwhelming in four areas: specification and identification of treatments, the determination of appropriate criteria of effectiveness, the conduct of the experiment, and the interpretation and generalization of results. (Author/IRT)

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EDUCATIONAL PLANNING AND TEACHING-LEARNING STRATEGIES - THE NOTES OF A SKEPTIC

Henry M. Levin

A contribution of the IIEP Seminar on "Teaching-learning strategies and educational planning"
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EDUCATIONAL PLANNING AND TEACHER-LEARNER STRATEGIES--THE NOTES OF A SKEPTIC

Introduction

The purpose of the Teacher-Learner Strategy project is ostensibly to test out different instructional arrangements in different national contexts to see which ones obtain the best results. In principle, it would appear that this task has three phases: (1) the design of approporiate experiments with different teacher-learner strategies (TLS); (2) implementation of the experiments and data collection on results and costs; (3) design of educational planning strategies that encompass the results of the experiments. The objective of this exercise is to obtain data on what works best within given cost constraints, and to use such information to improve the effectiveness and efficiency of national educational systems.

The logic of this approach is compelling. After all, everyone seems to agree that the educational systems of developing societies have never been evaluated systematically with respect to the most appropriate strategies that might be implemented. Second, the experimental approach is acknowledged to be the most powerful one for ascertaining the effects of different instructional treatments.[1] Third, the fact that the needs of educational planners will be taken into account in the actual design and implementation of the experiments means that there can be a natural bridge between the experimental results and the policy adoption of new approaches.

And fourth, the popularity of educational reforms for political purposes can be harnessed to the "scientific" evaluation of alternatives and to the implementation of the most cost-effective one rather than educational reform simply being undertaken for its own political value with substance and effect a secondary consideration.

The Fallacy of External Appearances

Yet, it is exactly the orderly appearance of the TLS project which might be its greatest problem. For in its logic and systematic attention to implementing what works best is a major pitfall which I will call the doctrine of external appearances. The doctrine of external appearances refers to an intellectual and reductionist treatment of a problem such that once a systematic set of procedures is adopted that appears to address a problem, it is assumed that the problem disappears. That is, the systematic set of procedures become the problem focus rather than the problem itself. Educational planners and researchers then concentrate on the technical aspects of experimentation, evaluation, and implementation while assuming that these are the issues that must be attended to. Lost in this attention to the external appearances is the substance of the problem itself and the assumptions that link these activities to the problem solution.

To give just one example of the doctrine of external appearances, there is a tacit assumption that the complexity of interactions between teachers and other adults and students and among students can be molded by educational planners, if only we can determine which TLS strategy is most preferable from a cost-effectiveness

point of view. Thus, if it could be shown that a mastery learning approach in a traditional educational system requires enormous changes in the technical proficiencies of teachers, organization of schools, availability and use of curriculum, and the values and attitudes of teachers, students, parents, and other persons.

There is a tacit assumption that educational planners are in a position to alter all of these aspects of schooling in order to implement the best approach. Yet, an alternative formulation of the development of schooling suggests a more historical approach. According to this approach the schools represent an historical response to the emerging industrial order, inculcating those traits that are functional to industrialism that could not be socialized in the more traditional family and community settings.[2] That is, historically the forces that molded the specific form and the expansion of schooling were not the rational desires and activities of educational planners, but the forces of industrialization that required a socialized labor force.[3]

In this latter version the acts of educational planners were strictly academic or else they were trivial. They were academic in the sense that the plans and estimates from the planner's drawing board were not the crucial determinants of the direction of educational development as evidenced by the wide margins of errors in manpower planning approaches and student flow models. That is, a retrospective review of the fruits of these exercises suggests that they had very little impact on actual educational outcomes. They were trivial in the sense that they

addressed only the building of classrooms and the expansion of a teaching force rather than focusing on the substance of the teacher-learner situation.

But, if educational planners have not even had much effect on initiating and implementing the superficial logistics of educational expansion and change, the TLS project suggests an even greater quandary. For the logical outcome of a successful search for a better teacher-learner strategy is an attempt to alter the substance of the schooling process itself rather than just its trappings. That is, the unspoken assumption of the TLS project is that educational planners will be able to intervene and alter the intricate set of social-psychological interactions of the educational process on a national scale.

That educational planners have been mere handmaidens in the process of educational development rather than the forgers of the process is reflected in the history of such activity. That is, they can support the political endeavors of the society in expanding schooling by calculating "manpower needs" or social demands, and they can assist in implementing these "needs" through numerical exercises with respect to teacher needs and classroom needs. But, they do not mold the nature of the expansion or the substance of the educational experience. These seem to be far more dependent upon political, economic, social, and cultural forces and the values of various groups of students, parents, teachers, and other adults who comprise the educational enterprise.[4] What evidence do we have that the most appropriate TLS design that emerges from an experiment for any given society will actually

be implementable in that society?

It is sobering to consider the experience at implementing even nominal reforms that attempted to intervene in teacher-learner process in the United States. For several decades there have existed projects to retrain teachers in subject matter, teaching methods, knowledge of particular cultural groups, new modes of curriculum organization and so on. At a more specific level they have included new staffing patterns, team teaching, open classrooms, flexible modular scheduling, educational radio and television, racial desegregation, and changes in school governance. I will make the following strong generalization in describing the results of these changes. THERE IS NO EVIDENCE TO SUPPORT THE VIEW THAT THEY MADE ANY DIFFERENCE IN MEASURABLE OUTCOME OR PROCESS OF SCHOOLING.[5] In many cases, it is not even clear that anything except the external appearances were even implemented.[6] Yet, many of these projects were fostered by major innovators and universities in settings which were considered to be highly amenable to change.

This brings us back to the doctrine of external appearances. If the history of educational reform is completely devoid of success in the educational planning sense--in contrast with a pattern of educational development that corresponded to changes in industrial capitalism--then how can we proceed with a TLS project that assumes that results will be used by educational planners to improve national educational systems? The evidence suggests that educational systems change in response to changes in the super-structure of society, and not the reverse. The

fact that educational planners, researchers, academics, educators, and political leaders talk about educational reforms and issue national plans for changing the educational system is part of the ideology of external appearances. The fact that there is little or no documentation of success in actually implementing such change is in stark contrast to the external appearance of rationality and planning and research that are inevitably used to legitimate that such planning and reform are actually taking place, even though they are not.

The point is that there is not much evidence that educational planners can implement new teacher-learner processes on the basis of the "proven" superiority of the new processes over traditional ones. If my contention is correct, the TLS project should not be undertaken for its usefulness in assisting educational planners as much as for its usefulness in assisting educational researchers. But, if the TLS project is designed to provide basic data on different TLS models in different national settings, there is another set of problems that will have to be confronted. These problems are neither unique to TLS concept, nor are they specific to a survey of cross-national scope. But, as I will describe below, they are exacerbated in these cases.

Cross-National Experiments and Their Pitfalls

Let us assume that the experiments are designed in ways that are technically acceptable with respect to sampling and data analysis. That is, students and teachers will be randomly assigned to treatments either as individuals or as clusters. The appropriate data collection and comparisons will be employed, in

principle, to evaluate the experiments. Even if we can assume this to be the case--one of the first times in the history of large-scale educational experimentation that it would be--there are matters of substance that are even more difficult to address.[7] These include the precise specification and identification of treatments; the appropriate criteria of effectiveness; the conduct of the experiment; and the interpretation and generalization of results.

In the remainder of this note, I will refer to problems of doing a cross-national TLS experiment or set of experiments. That is, it will appear that I am not referring directly to the implications of the separate national projects that will be discussed at the TLS seminar in March 1976. In fact, there is a direct connection between the characteristics of an experiment, and those of the TLS seminar. For, if it will be difficulty to draw reliable conclusions from a set of experiments on the subject, consider the even greater unreliability of comparisons based upon a set of separate national projects. Accordingly, the problems and criticizms that I will set out below would suggest that the advisability of a cross-national set of experiments on the subject would be of dubious policy value for both cross-national educational researchers and for educational planners. Inferences drawn from cross-national comparisons or cross-strategy comparisions based upon the separate national projects that will be reported at the seminar will be even shakier.

Specification and Identification of Treatments

The present description of different teacher-learner strategies is useful only as a first approximation for the actual treatments that will be employed. Just the crudest dimensions of the different treatments are set out, and most of these are related to the organization of the classroom and curriculum rather than to the more intricate attributes of the personnel and their interactions with the classroom and curriculum organization and the students. But, retrospective evaluations of what are viewed as similar innovations in the schools suggest that quite different treatments are taking place in settings even when innovations are characterized as similar.[8] In Britain, the so-called "infant schools" differ in substance from setting to setting even though both physical space and time are used similarly among such schools. Authoritarian teachers in one such location create quite a different interaction than do those who encourage experimentation among their students, even though both will appear to be going through the same motions with respect to use of the facilities and curriculum.

The point is that the present specification of treatments is so vague in an operational sense and differences in organization of classrooms and curriculum can be so easily offset by personnel factors such as attitudes, values, and capabilities which affect their behavior, that a far more precise specification and identification of actual treatments will be necessary for the experiment. But, such an exercise can neither be done from the drawing-board, nor can one rely upon each national entity to

pursue its own version of the TLS. We are faced with the paradox that to be more precise requires addressing directly the actual implementation of the experiment in the field, and such precision can only be done in retrospect. In any area as complex as an *in vivo* educational experiment, all the best laid plans of men will always be imperfectly implemented. We can not create experimental treatments by recipe, because even if we could select precise amounts of homogeneous ingredients in every important respect, we can not predict the effects and interactions that the combination of ingredients has on altering the nature of the result. That is, educational personnel and students are not inert aspects of the treatment, but they can affect it in unpredictable ways. Therefore, an identification of the actual experimental (and control) treatment requires a precise specification and identification of what *actually* took place rather than what was attempted or planned.

If such documentation were a part of the experiment, would it be useful? First, it would have to be standardized among sites, and differences among observers at particular national settings will create non-reliability in assessing differences among experiments. This is likely to be true even if a standardized instrument for documenting treatments is used because we lack the knowledge base for measuring precisely the nature of instructional interactions, and there is likely to be a high probability of overlooking subtle, but crucial, factors. Even if we send the same set of "experts" to each site to assist in the documentation, there still exists the previous deficiency

of an inadequate knowledge base and the further danger that short term assessments will measure transitional phenomena during an experiment characterized by instability and change as a new approach is implemented. In the United States the problem of imprecision in the definition of treatments has led to the situation that even when experimental differences are found in favor of a particular "treatment", one can not be certain of what actually worked. In fact, replications of experimental results from instructional treatments and resultant generalizations are virtually impossible to find.[9]

Criteria of Effectiveness

Determining the appropriate criteria of effectiveness or success is a second problem in a cross-national experimental strategy. What is important in one society is not necessarily important in another one, and there exist differences even among sectors of a given society (e.g. urban-rural differences). It is true that there will probably be strong agreement among educational planners and researchers about the broad criteria that are important. Such professionals share a common culture that is based upon their common training and professional experiences. Most international educators have been trained at institutions in the United States or in Western Europe, and the literature and values embodied in such training programs emphasize a few limited dimensions of cognitive achievement as the qualtiave dimension of education. But, agreement among educators or educational planers is essentially an affirmation of their common

training and professional experiences rather than an accord among their societies about what is important in terms of educational outcomes. It is noteworthy that recent research accentuates the non-cognitive factors of personality development and behavior as being more important in predicting success in the labor market and workplace than those factors reflected by achievement scores.[10]

But, what are these factors? Unfortunately, they have been investigated very little in a milieu in which the ideology of schooling presumes that cognitive achievement is the ingredient which contributes most to national and personal development and welfare. Accordingly, there is a conceptual gap in specifying and measuring the criteria of effectiveness in general, and it is aggravated by the need to differentiate among national entities according to their specific needs in contrast to general factors of effectiveness. Thus far the literature on the selection of educational criteria and their cross-national differentiation according to different cultural, economic, political, and social needs is highly inadequate. But, a cross-national TLS experimental project must presume a relatively high uniformity in educational goals and measures, and this commonality will be more a derivation of the commonalities in training and ideologies of educational planners and researchers than one based upon an examination of national and sub-national needs (e.g. urban vs. rural).[11]

Of course, if different nations have different needs that are reflected by a diversity of criterion measures of outcome among countries, then the appropriate comparison should be that of experimenting with different teacher-learner strategies in the same

society. In this case, no cross-national comparisions would be made, but only intra-national comparisons.

Conduct of Experiment

I assume that each participating country would manage its own experiments. The IIEP would attempt to coordinate and train the investigators as well as assisting in designing the experiments. But, differences in the conduct of experiments in themselves will produce differences in outcomes. For example, differences in training among evaluators and researchers within countries and in such areas as testing will create their own effects. Nor can one be optimistic about avoiding such differences, given the relatively nominal involvement of the IIEP in monitoring these aspects. One of the best-known experiments in the United States, that of educational performance contracting, was carried out by the Office of Economic Opportunity. A single testing contractor was used for all of the eighteen experimental sites. Yet, there were vast differences in the test administration procedures and testing conditions from site to site that imparted their own pattern of bias to the test results.[12] Further, a single institution was charged with monitoring the treatments and operations at the eighteen sites with the expectation that such an endeavor would tend to standardize the management or at least document differences in the conduct of the experiment.[13] This procedure also failed to guarantee uniformity or appropriate documentation of differences.

Yet, if a single national agency in the United States employing reputable research and management firms selected in a national competition are unable to assure uniformity in the testing and

the conduct of the experiments, how will this be possible in the TLS project. In contrast to a single country, there will be several, and in contrast with having a single set of contractors carrying out the testing, project management, and monitoring, most of these functions will be charged to the national governments and their local representatives at the experimental sites. While the IIEP will train the project personnel in short-term institutes, I have little faith that this activity will do any more than to smooth over the gross differences in procedures that might have emerged without training. In short, under the present set of plans, the differences among sites in the conduct of the individual experiments will necessarily be part of the "treatments" themselves. While they are likely to have an effect on outcomes, it will be an effect that will be difficulty or impossible to separate from other treatment effects.

Interpretation and Generalization of Results

This brings up the final issue, the interpretation and generalization of results. How can such results be compared among countries with different goals, treatments that are described according to external appearances rather than actual ingredients and processes, differences in administration and testing, and so on. The purpose of the TLS seminar is to review existing projects in a number of societies that may fit one or another of the different TLS models in order to ascertain their implications for educational planners as well as to assist IIEP in planning further research on these matters. Much of the discussion and the presentations will be couched in the scientific terminology of experimentation and evaluation with technical descriptions of samples, instruments,

treatments, statistical methodologies, and results. Yet, these discussions may give a false sense of security to the participants.

Differences among projects in all of their dimensions will be partially unobservable, as the projects are "fitted" to different TLS models. Yet, the language of evaluation that will be used to describe projects will tend to be far more precise and uniform then will the underlying phenomena that have transpired or that are being planned. Accordingly, a major focus of the seminars must be that of addressing the inevitable ideosyncratic nature of separate projects that defies the standardization needed for comparison and for replication. This task is quite different than the more optimistic one of exploring their implications for educational planning, for the latter can not be done effectively without a far more precise understanding of the strategies and their consequences.

FOOTNOTES

1- For a view recommending the use of systematic experimentation for social policy formation, see A. Rivlin, Systematic Thinking for Social Action (Washington, D.C.: The Brookings Institution, 1971). For a pessimistic view based upon experience in a format similar to that of TLS, see A. Rivlin and M. Timpane (ed.), Planned Variation in Education: Should We Give Up or Try Harder? (Washington, D.C.: The Brookings Institution, 1975).

2- See S. Bowles and H. Gintis, Nightmares and Visions: Capitalism and Education in the United States (tentative title) (New York: Basic Books, forthcoming 1976). M. Carnoy and H. Levin, The Limits of Educational Reform (New York: David Mc Kay and Co., Inc. forthcoming 1976).

3- S. Bowles and H. Gintis, "Class Power and Alienated Labor," Monthly Review (March 1975), pp. 9-25.

4- H. M. Levin, "Educational Reform and Social Change," The Journal of Applied Behavioral Science, Vol. 10, No. 3 (August 1974), pp. 304-320.

5- For reviews of recent reforms in the United States and their evaluations with respect to improved cognitive performance, educational attaintments, vocational skills, and earnings, see H. M. Levin, "A Decade of Policy Developments in Improving Education and Training for Low-Income Populations," in Robert Haveman (ed.), A Decade of Federal Anti-Poverty Policy: Achievements, Failures, and Lessons (New York: Academic Press, forthcoming 1976).

6- The fact that the rhetoric of reform is often its most important manifestation is reflected in the evaluation literature on the subject. See, for example, W. W. Charters, Jr. Measuring the Implementation of Differentiated Staffing (Eugene, Oregon: The Center for the Advanced Study of Educational Aministration, 1973); N. Gross, J. Giacquinta, and M. Bernstein, Implementing Organizational Innovations (New York: Basic Books, Inc., 1971); and S. B. Sarason, The Culture of the School and the Problem of Change (Boston: Allyn and Bacon, Inc., 1971).

7- The only attempt to use this "planned variation" approach in the United States has been an abysmal failure despite an evaluation and design expenditure of $25 million or so (not including the costs of the educational resources involved in the experiments). See Rivlin and Timpane, op. cit.

8- See the references in footnote 6.

9- In this respect, compare the optimism and attempt to generalize the research findings on teacher effectiveness reflected by Barak Rosenshine and Norma Furst, "The Use of Direct Observation to Study Teaching," in Robert M. W. Travers (ed.), Second

Handbook of Research on Teaching (New York: Rand Mc Nally, Inc., 1973), Chapter 5 and its critical review in R. W. Heath and M. A. Nielson, "The Research Basis for Performance-Based Teacher Education," Review of Educational Research, Vol. 44, No. 4 (Fall 1974), pp. 463-484.

10- H. Gintis, "Education, Technology, and the Characteristics of Worker Productivity," American Economic Review, Vol. 61, No. 2 (May 1971), pp. 266-279.

11- For a similar criticizm of international evaluations of educational media with illustrations of this effect, see M. Carnoy and H. Levin, "Evaluation of Educational Media: Some Issues," Instructional Science, Vol. 4 (1975), pp. 385-406.

12- E. M. Gramlich and P. P. Koshel, Educational Performance Contracting (Washington, D.C.: The Brookings Institution, 1975), Chapter 3.